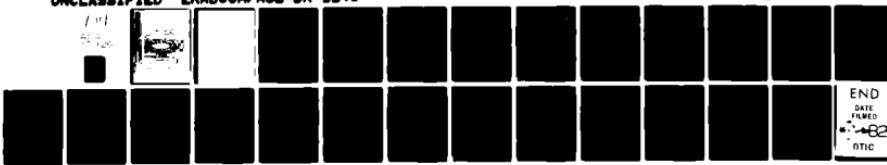


AD-A117 126 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/8 5/2
19318A MLRS, MISSILE NUMBERS BN-107, BN-102, BN-103, ROUND NUMB--ETC(U
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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19318A MLRS, Missile Number BN-107, BN-102, BN-103, Round Number V265/PQ-5, V-266/PQ-6, V-267/PQ-7 are presented in tabular form.		

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INTRODUCTION

19318A MLRS, Missile Numbers BN-107, BN-102, and BN-103, Round Numbers V-265/PQ-5, V-266/PQ-6, and V-267/PQ-7, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1400, 1400:05, and 1400:10 MDT, 02 Jun 1982. The scheduled launch times were 1400, 1400:04.5, and 1400:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at :

SITE AND ALTITUDE

WSD 2000 meters
DON 1150 meters

(2) Air structure data (rawinsonde) were collected at the following Met Site:

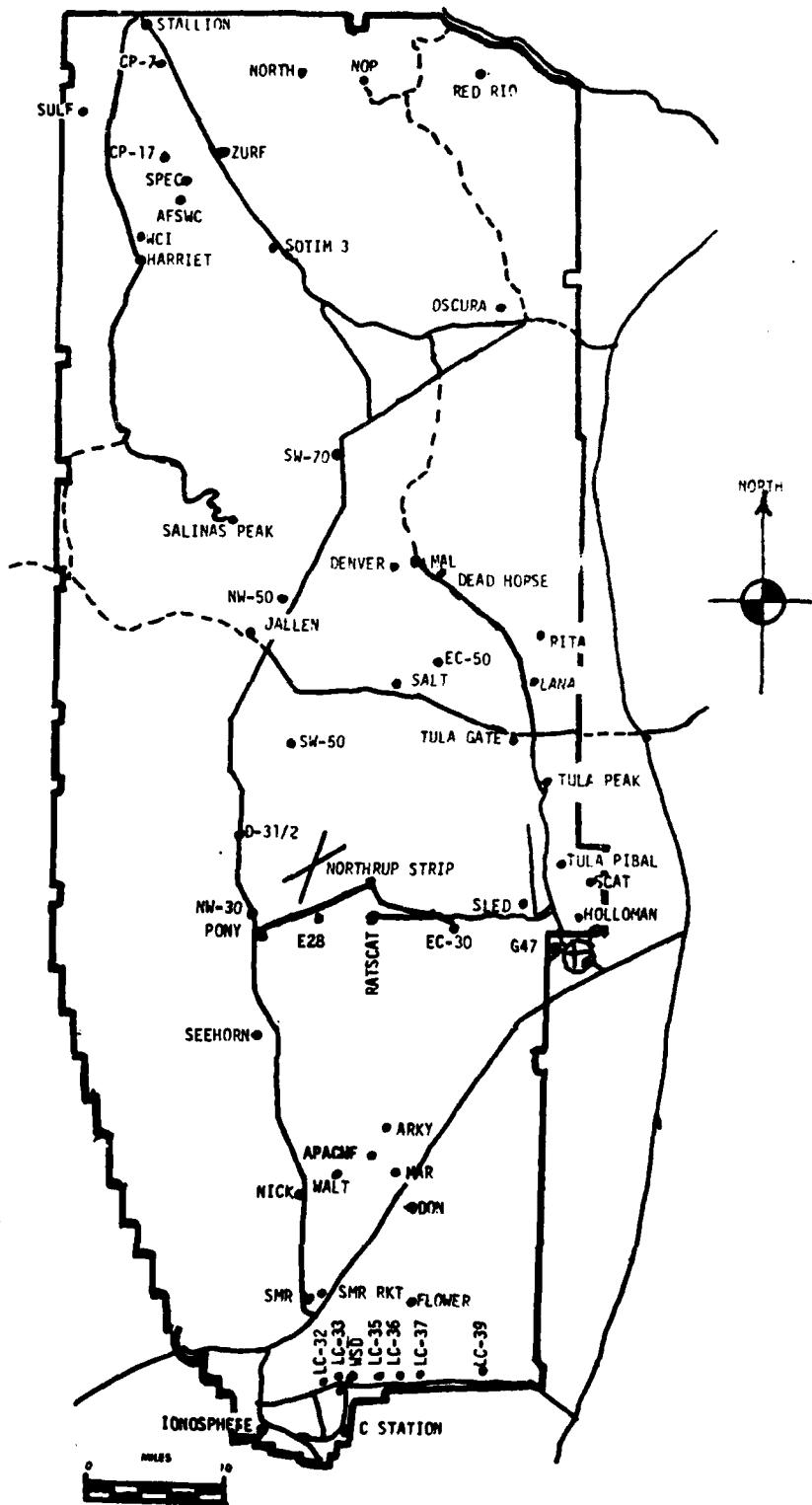
SITE AND TIME

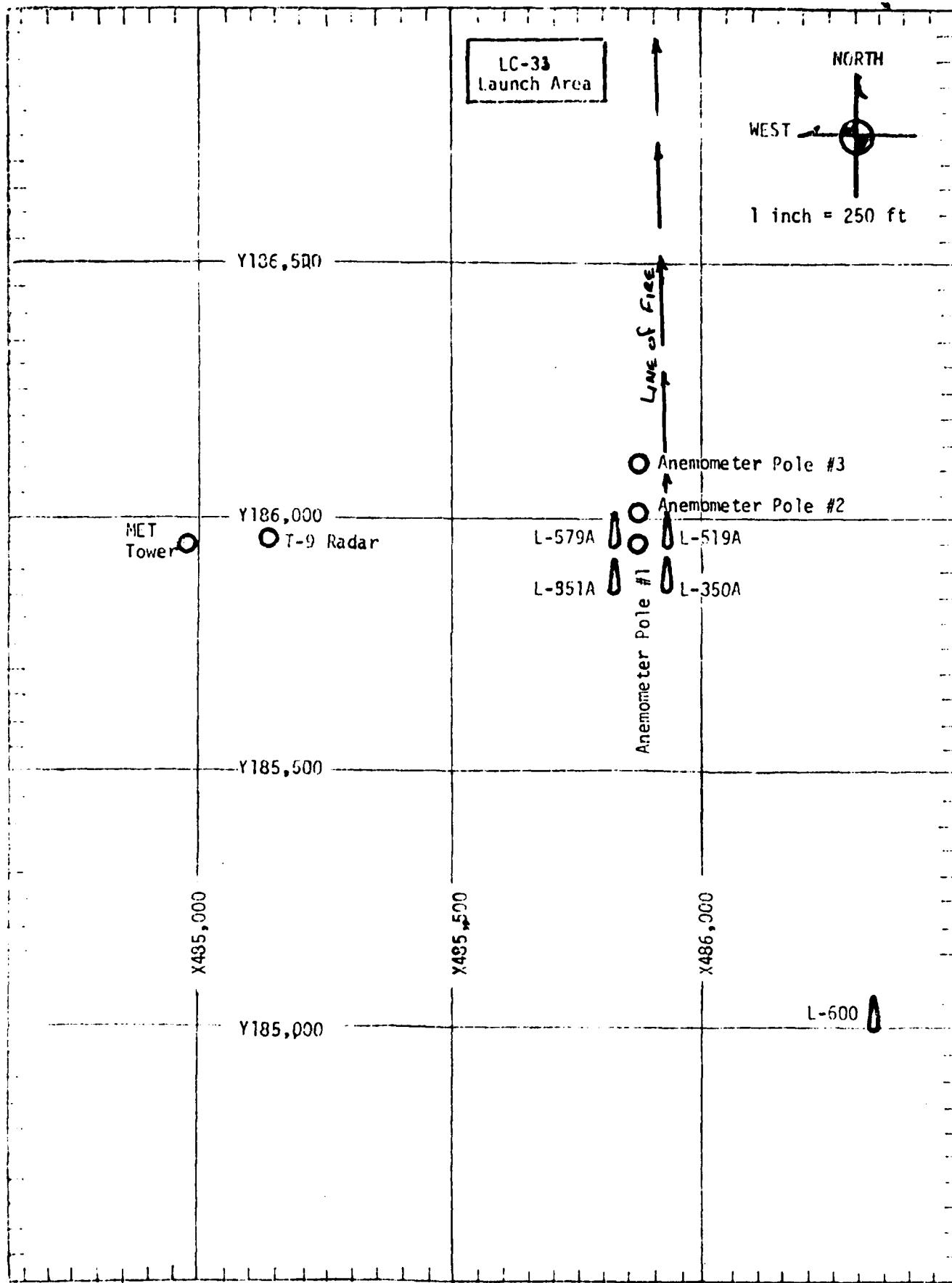
WSD 1100 MDT
LC-37 1208 MDT
WSD 1240 MDT
LC-37 1440 MDT

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WSMR METEOROLOGICAL SITES





1
L
C
T

DATE	TIME	PRESSURE IN. MM.	TEMPERATURE OF OCEAN IN. MM.	DEW POINT IN. MM.	WIND DIRECTION IN. MM.	WIND SPEED IN. MM.	SPECIES SIGHTED	NUMBER SIGHTED	VISIBIL- ITY	
1944-02-06 1820	1400	874.9	33.0	-5.8	08	991		245	09	60

DESTRUCTION TO VISIBILITY	CLOUDS						REMARKS	
	1st LAYER		2nd LAYER		3rd LAYER			
AMT	TYPE	HGT	AMT	TYPE	HGT	AMT	TYPE	HGT
1	C1	25,000						

SYNTHETIC CATIONIC

TIME: MDT	1400
DRY BULB TEMP.	33.0
WET BULB TEMP.	13.2
WET BULB DEPR.	19.8
DEW POINT	-5.8
RELATIVE HUMID.	8%

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	207	12	-30	232	12	-30	244	15
-20	212	12	-20	228	13	-20	243	14
-10	212	10	-10	231	10	-10	234	13
0.0	207	10	0.0	242	13	0.0	243	16
+10	194	12	+10	250	12	+10	258	15

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	242	10	-30	242	14
-20	243	10	-20	245	12
-10	253	08	-10	244	10
0.0	245	09	0.0	231	10
+10	240	07	+10	233	10

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	231	14	-30	240	11
-20	234	11	-20	240	11
-10	228	10	-10	229	11
0.0	228	10	0.0	231	10
+10	223	10	+10	229	10

TABLE 4

1-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 02 June 1982

SITE: WSD
 TIME: 1400 MDT
 WSTM COORDINATES:
 X= 488,580.00
 Y= 185,045.00
 H= 3,989.00

SITE: DON
 TIME 1400 MDT
 WSTM COORDINATES:
 X=511,988.37
 Y=247,396.36
 H= 3,996.83

LAYER	MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER	MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		260	12	SURFACE		300	04
150		241	13	150		285	07
210		238	14	210		282	09
270		234	09	270		280	10
330		249	11	330		278	12
390		251	12	390		275	14
500		244	12	500		269	17
650		265	11	650		266	20
800		273	09	800		268	17
950		251	09	950		264	13
1150		244	12	1150		245	14
1350		243	12	1350			
1550		237	09	1550			
1750		250	09	1750			
2000		244	09	2000			

Data obtained from NIKE-HERC
 Radar Tracked pilot-balloon
 observation.

Data obtained from RAPTS T-9
 Radar Tracked pilot-balloon
 observation.

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
02 June 1982

WSD 1100 MDT	LC-37 1208 MDT
METCM1324064	METCM1324063
021700122876	021810124874
00480008 30350876	00427004 30160874
01498010 29930866	01514012 29950864
02527009 29650841	02520009 29650838
03516014 29210803	03493010 29260801
04524009 28760757	04515009 28820756
05512016 28490713	05504018 28430712
06509030 28190672	06511030 28260670

WSD 1240 MDT	LC-37 1440 MDT
METCM1324064	METCM1324063
021860122876	022060124872
00427008 30320876	00373006 30650872
01488008 30090866	01434012 30460862
02520010 29900842	02490013 30090838
03516011 29550804	03472012 29680801
04490009 29020758	04470014 29180756
05489016 28500715	05466014 28720713
06502027 28220673	06492017 28380671

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 62 1100 MDT
ASCENSION NO. 247

SIGNIFICANT LEVEL DATA
15300±0247
WHITE SANDS

STATION COORDINATES
32°40'04.3 LAT UEG
106°37'33.3 LONG UEG

TABLE-6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT
875.5	3989.0	29.7	10.0
868.1	4234.8	24.8	17.0
850.0	4838.8	23.7	16.0
786.5	7033.3	16.5	16.0
759.1	8756.3	12.5	11.1
721.5	9419.4	12.3	12.8
700.0	10248.6	10.4	14.3
677.9	11122.9	8.5	15.8
652.1	12173.3	7.6	16.6
618.7	13586.4	4.0	19.5
602.1	14312.8	4.1	19.4
545.3	16933.7	-1.4	25.9
521.7	18080.3	-4.2	26.2
500.0	19186.4	-4.7	26.6
483.7	20042.6	-5.6	22.9
425.3	23305.8	-14.6	26.9
411.3	24137.1	-16.6	26.2
400.0	24823.8	-18.5	25.8
390.7	25400.8	-19.2	20.1
370.5	26695.6	-21.3	31.6
357.5	27560.5	-22.8	34.6
300.0	31711.5	-32.6	44.5

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 02 1100 MDT
ASCENSION NO. 247

UPPER AIR DATA
1530020247
WHITE SANDS
TABLE-7

GEODSTATIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC PRESSURE ALITUDE MSL FEET	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	SHIELD OF SOUND METERS	INDEX OF REFRACTION
3989.0	875.5	29.7	-5.1	10.0
4000.0	875.2	29.5	-4.9	10.3
4500.0	860.1	24.3	-2.6	16.6
5000.0	845.2	23.2	-3.9	16.1
5500.0	830.3	21.5	-4.8	16.6
6000.0	815.6	19.9	-5.6	17.1
6500.0	801.5	18.2	-6.8	17.5
7000.0	787.4	16.6	-7.8	18.0
7500.0	773.4	15.4	-8.9	18.0
8000.0	759.5	14.3	-9.7	18.0
8500.0	746.0	13.1	-10.7	18.0
9000.0	734.6	12.4	-11.7	17.3
9500.0	719.4	12.1	-12.9	16.0
10000.0	706.4	11.0	-13.8	16.0
10500.0	693.6	9.9	-14.7	16.0
11000.0	680.9	8.8	-15.6	16.0
11500.0	668.5	8.2	-16.1	16.0
12000.0	655.3	7.7	-16.5	16.0
12500.0	644.2	6.8	-17.2	16.0
13000.0	632.3	5.5	-18.3	16.0
13500.0	620.7	4.2	-19.3	16.0
14000.0	609.2	4.1	-19.5	16.0
14500.0	597.9	3.7	-19.7	16.0
15000.0	586.7	2.7	-20.6	16.0
15500.0	575.7	1.6	-21.5	16.0
16000.0	564.9	.6	-22.3	16.0
16500.0	554.3	-5	-23.2	16.0
17000.0	543.9	-1.6	-24.0	16.0
17500.0	533.6	-2.8	-25.0	16.0
18000.0	523.4	-4.0	-26.0	16.0
18500.0	513.4	-4.4	-26.4	16.0
19000.0	503.6	-4.6	-26.5	16.0
19500.0	494.0	-5.0	-25.1	16.9
20000.0	484.5	-5.6	-23.0	23.6
20500.0	475.1	-6.9	-23.3	25.4
21000.0	465.8	-8.2	-23.9	26.9
21500.0	455.7	-9.6	-24.5	28.5
22000.0	447.8	-11.0	-25.1	30.0
22500.0	439.0	-12.4	-25.8	31.5
23000.0	430.5	-13.8	-26.5	33.1

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 62 1100 MDT
ASCENSION NO. 247

UR-PLR AIR DATA
1530020244
WHITE SANDS

TABLE-7 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	SHF/LW GM/CUBIC METER	SOUND NOISE	WIND DIR/VEL (IN) KNOTS	WIND DIR/VEL (IN) KNOTS	INDEX OF REFRACTION
23500.0	422.0	-15.1	-26.7	36.1	569.3	020.0	<00.0	65.3	1.000131
24000.0	413.6	-16.3	-26.3	41.5	560.5	624.6	<70.0	62.1	1.000129
24500.0	405.3	-17.6	-24.7	53.6	552.1	623.0	<71.0	59.2	1.000128
25000.0	397.1	-18.7	-24.5	60.3	543.3	621.7	<72.0	58.9	1.000126
25500.0	389.1	-19.4	-26.5	52.8	533.6	620.8	<73.7	58.5	1.000123
26000.0	381.2	-20.2	-28.6	46.6	524.7	619.8	<74.0	61.7	1.000120
26500.0	373.5	-21.0	-30.9	40.4	515.7	616.8	<75.4	65.0	1.000118
27000.0	365.9	-21.8	-32.7	36.2	506.9	617.7	<76.1	64.7	1.000115
27500.0	358.4	-22.7	-34.4	33.3	498.3	616.6	<76.6	64.5	1.000113
28000.0	350.9	-23.8	-35.6	32.6	490.2	615.2	<77.3	63.0	1.000111
28500.0	343.6	-25.0	-36.8	32.1	482.2	615.8	<77.7	61.9	1.000109
29000.0	336.4	-26.2	-38.0	31.6	474.4	612.3	<77.0	61.8	1.000107
29500.0	329.4	-27.4	-39.2	31.1	466.8	610.8	<77.5	63.1	1.000105
30000.0	322.5	-28.6	-40.4	30.6	459.2	609.3	<77.5	65.5	1.000103
30500.0	315.8	-29.7	-41.6	30.2	451.6	607.9	<77.9	60.4	1.000102
31000.0	309.2	-30.9	-42.8	29.7	444.5	605.5	<77.4	604.9	1.000100
31500.0	302.7	-32.1	-44.0	29.2	437.4	<04.9			1.000098

STATION ALTITUDE 3489.00 FEB 1 MSL
2 JUNE 02 ASCENSION 40.
247 1100 MDT

TABLE-8
MANDATORY LEVELS
153002024/
WHITE SANUS

GEODETIC COORDINATES
32°40'043 LAT DEG
106°37'033 LONG DEG

TABLE-8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DIRECTION DEGREES (1 TN)	SPEED KNOTS
850.0	4835.	23.7	-3.6	10.	282.0	9.5
800.0	6552.	18.1	-6.9	11.	293.2	12.3
750.0	8345.	13.4	-10.4	18.	292.9	9.9
700.0	10238.	10.4	-14.3	16.	287.1	21.1
650.0	12247.	7.4	-16.8	16.	285.4	31.0
600.0	14369.	3.9	-19.6	16.	273.5	31.5
550.0	16687.	-9	-23.5	10.	268.4	33.0
500.0	19159.	-4.7	-26.6	16.	269.0	50.6
450.0	21854.	-10.7	-24.9	30.	268.8	60.0
400.0	24782.	-16.5	-23.6	63.	272.2	59.0
350.0	28020.	-24.0	-35.8	33.	277.4	62.9
300.0	31648.	-32.6	-44.5			

STATION ALTITUDE 4051.37 FEET MSL
2 JUN 62 1208 MOT
ASCENSION NO. 53

SIGNIFICANT WEATHER DATA

150100Z JUN 62

LC-37

TABLE - 9

STUDY SITE COORDINATES
32°40'17" LAT DEG
106°31'23" LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
673.6	4051.4	27.8	10.0
661.7	4447.2	25.0	14.0
650.0	4839.3	23.9	14.0
776.8	7313.0	16.7	15.0
709.0	9906.0	10.3	14.0
706.0	10254.6	9.9	14.0
680.4	11029.2	10.1	13.0
653.1	12142.3	7.9	13.0
635.1	12898.9	7.8	13.0

STATION ALTITUDE 4051.37 FEET MSL
 2 JUNE 62 ASCENSION NO. 53 1208 MDT

UPPER AIR DATA
 1530100033
 LC-37

TABLE-10

GEODETIC COORDINATES
 J2.40175 LAT DEG
 106.31232 LON DEG

GEOMETRIC ALTITUDE HSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPD. OF SOUND MILES/MIN	WIND DATA MILES/HOUR	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.4	875.6	27.8	-6.6	10.0	1009.0	676.4	440.0	1.000241
4500.0	860.1	24.9	-4.4	14.0	1003.5	672.2	263.2	1.000242
5000.0	845.2	23.4	-5.5	14.1	991.0	671.5	277.8	1.000238
5500.0	830.4	22.0	-6.5	14.3	978.5	669.8	285.9	1.000234
6000.0	815.8	20.5	-7.4	14.5	966.2	668.2	281.0	1.000231
6500.0	801.5	19.1	-8.4	14.7	954.1	666.5	279.1	1.000227
7000.0	787.5	17.6	-9.4	14.9	942.1	664.6	276.0	1.000223
7500.0	773.5	16.2	-10.5	14.9	929.9	663.2	283.0	1.000220
8000.0	759.7	15.0	-11.6	14.7	917.3	661.7	299.0	1.000216
8500.0	746.0	13.8	-12.8	14.5	904.6	660.3	291.7	1.000212
9000.0	732.6	12.5	-13.9	14.3	892.4	659.8	286.1	1.000208
9500.0	719.5	11.3	-15.1	14.2	880.3	657.4	284.1	1.000205
10000.0	706.6	10.2	-16.1	14.0	867.9	655.1	283.9	1.000202
10500.0	693.7	10.0	-16.5	13.7	852.6	653.6	284.6	1.000198
11000.0	681.1	10.1	-17.0	13.0	837.0	652.9	285.7	1.000194
11500.0	668.7	9.2	-17.8	13.0	824.5	654.9	284.7	1.000191
12000.0	656.5	8.2	-18.6	13.0	812.3	653.7	1.000188	
12500.0	644.5	7.9	-18.8	13.0	796.4	653.3	1.000184	

STATION ALTITUDE 4510.37 FEET
2 JUN 82 1208 MDT
ASCENSION 1.0. 53

WEATHER STATION LL,LL
1530160000Z
LC-37
TABLE-11

STATION COORDINATES
52.40175 LAT DEC
106.31232 LONG DEC

MILLIBARS	FEET	PRESSURE AT POTENTIAL DEGREES	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	WIND DIRECTION ELEVATION (TN)	WIND SPEED KNOTS
650.0	4836.	23.9	-5.2	14	274.0	0.5
800.0	6555.	18.9	-8.5	15	277.9	10.2
750.0	8353.	14.1	-12.4	15	293.0	0.8
700.0	10244.	9.9	-16.3	14	284.3	2.5
650.0	12258.	7.9	-18.6	15		

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 62 1240 MDT
ASCENSION NO. 248

SIGNIFICANT LEVEL DATA
1530020240
WHITE SANDS
TABLE-12

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOMETRIC MILLIBARS MSL FEET	ALTITUDE DEGREES CENTIGRADE	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	RFL.HUM. PERCENT
875.6	3989.0	29.5	-5.3
865.8	4322.3	26.3	.1
850.0	4853.7	25.8	-1.1
789.4	6966.2	20.3	-4.0
733.6	9015.2	13.3	-9.8
709.0	10301.7	9.9	-13.3
679.2	11121.9	8.2	-15.4
670.1	11488.4	9.5	-14.3
635.3	12932.4	6.2	-17.0
609.3	14056.0	5.6	-17.5
517.7	16357.8	-3.9	-26.0
500.0	19259.4	-4.5	-26.5
477.9	20425.0	-6.8	-23.9
454.3	21717.5	-10.1	-23.3
432.1	22979.2	-13.8	-26.7
424.5	23422.0	-14.9	-26.0
409.9	24289.9	-17.1	-22.4
400.0	24892.3	-18.3	-24.5

STATION ALTITUDE 3489.0 FEET MSL
2 JUNE 62 1240 MDT
ASSEMBLIGN NO. 248

U-PUR AIR DATA
1530020240
WHITE SANDS
TABLE-13

GEODETIC COORDINATES
52.4043 LAT DEG
106.37033 LONG DEG

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE MILLIBARS	AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOTS	REFLECTION METERS (ft)	REFLECTION KNOTS	REFRACTION KNOTS	REFRACTION OF REFRACTION
3989.0	875.8	29.5	-5.3	10.0	1000.3	678.3	640.0	640.0	1.000241
4000.0	873.5	29.4	-5.0	10.3	1000.2	678.2	640.2	640.2	1.000242
4500.0	860.5	26.1	-3.3	17.7	999.0	674.0	620.1	620.1	1.000248
5000.0	845.7	25.4	-1.3	17.1	984.2	674.0	620.7	620.7	1.000243
5500.0	831.0	24.1	-2.0	17.6	971.3	674.0	606.0	606.0	1.000239
6000.0	810.6	22.8	-2.7	18.1	956.9	671.0	670.3	670.3	1.000235
6500.0	802.4	21.5	-3.4	18.6	946.3	669.3	685.0	685.0	1.000232
7000.0	788.4	20.2	-4.1	19.0	934.0	666.0	664.0	664.0	1.000228
7500.0	774.5	18.5	-5.5	19.0	923.3	665.9	680.9	680.9	1.000224
8000.0	760.7	16.8	-6.9	19.0	912.5	662.9	670.0	670.0	1.000220
8500.0	747.2	15.1	-8.4	19.0	901.7	661.0	672.0	672.0	1.000216
9000.0	734.0	13.4	-9.8	19.0	891.2	659.9	672.0	672.0	1.000212
9500.0	720.8	12.0	-11.1	18.6	879.3	656.3	674.0	674.0	1.000208
10000.0	707.7	10.7	-12.5	18.2	867.5	656.8	676.9	676.9	1.000204
10500.0	694.9	9.5	-13.8	17.6	856.5	653.3	679.5	679.5	1.000201
11000.0	682.3	8.5	-15.0	17.1	843.1	654.1	681.0	681.0	1.000197
11500.0	669.8	9.5	-14.3	17.0	824.7	655.3	685.2	685.2	1.000193
12000.0	657.6	8.3	-15.3	17.0	812.9	654.0	693.0	693.0	1.000190
12500.0	645.5	7.2	-16.2	17.0	801.4	652.6	692.4	692.4	1.000187
13000.0	633.7	6.2	-17.0	17.0	789.6	651.4	690.4	690.4	1.000184
13500.0	622.0	5.9	-17.2	17.0	775.6	651.1	676.0	676.0	1.000180
14000.0	610.6	5.6	-17.5	17.0	762.2	650.8	675.0	675.0	1.000177
14500.0	599.1	4.6	-18.4	16.9	750.7	649.6	699.3	699.3	1.000174
15000.0	587.9	3.5	-19.3	16.8	739.6	648.3	707.1	707.1	1.000171
15500.0	575.9	2.4	-20.3	16.7	728.7	641.7	686.4	686.4	1.000168
16000.0	566.1	1.3	-21.3	16.5	716.0	642.0	690.0	690.0	1.000166
16500.0	555.4	.2	-22.3	16.4	707.4	644.3	685.1	685.1	1.000163
17000.0	545.0	-9	-23.3	16.3	696.9	645.0	695.4	695.4	1.000160
17500.0	534.8	-2.0	-24.3	16.2	686.7	641.7	686.4	686.4	1.000157
18000.0	524.8	-3.1	-25.3	16.1	676.0	640.4	692.0	692.0	1.000155
18500.0	514.9	-4.0	-26.0	16.0	666.0	639.3	694.4	694.4	1.000152
19000.0	505.0	-4.3	-26.3	16.0	654.1	638.9	694.9	694.9	1.000149
19500.0	495.4	-5.0	-25.8	17.7	645.1	638.2	666.0	666.0	1.000147
20000.0	485.8	-6.0	-24.6	21.1	633.0	637.1	688.7	688.7	1.000145
20500.0	476.5	-7.0	-23.9	24.5	623.2	635.6	690.0	690.0	1.000144
21000.0	467.3	-8.3	-23.5	28.0	614.1	634.3	696.0	696.0	1.000142
21500.0	458.2	-9.5	-23.3	31.5	605.0	632.6	697.5	697.5	1.000140
22000.0	449.2	-10.9	-24.5	31.7	596.4	631.1	697.7	697.7	1.000137
22500.0	440.4	-12.4	-26.6	29.3	586.0	629.3	707.1	707.1	1.000135
23000.0	431.7	-13.9	-28.5	27.5	579.7	627.5	697.5	697.5	1.000132

STATION ALTITUDE 3,989.00 FEET SL
2 JUNE 02 1240 MNT
ASCENSION NO. 4A

U-PER AIR DATA
1530020246
WHITE SANDS
TABLE-13 cont'd

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER	WIND DIRECTION DEGREES (10)	WIND DATA KNOTS	INDEX OF REFRACTION
23500.0	420.2	-15.1	40.2	570.9	020.0	62.0	1.000131
24000.0	414.7	-16.4	23.3	54.6	562.2	624.5	1.000131
24500.0	406.4	-17.5	-23.1	61.3	553.4	623.2	1.000129

STATION ALITUDE 3989.00 FT MSL
2 JUNE 62 1240 MDT
ASCENSION NO. 248

MANDATORY LEVELS
153002Z240
WHITE SANDS

TABLE-14

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPONT PERCENT	KEL.HUM. DEGREES (TN)	WIND DATA DIRECTION SPEED KNOTS
1050.0	4850.	25.0	-11.1	250.9	0.1
800.0	6583.	21.3	-3.5	284.0	10.2
750.0	8395.	15.4	-8.1	275.4	9.9
700.0	10292.	9.9	-13.3	276.6	20.5
650.0	12302.	7.6	-15.6	282.7	27.8
600.0	14451.	4.7	-18.3	269.0	26.3
550.0	16755.	-4	-22.8	264.1	34.2
500.0	19232.	-4.5	-26.5	267.0	30.6
450.0	21924.	-10.8	-24.3	267.1	28.4
400.0	24850.	-18.3	-24.5	58.	

GEODETIC COORDINATES
32°40'04.3 LAT LEG
106°37'03.3 LON LEG

STATION ALTITUDE 4051.37 FEET MSL
2 JUNE 82 1440 MDT
ASCENSION NO. 55

SIGNIFICANT LEVEL DATA
15301800055
LC-37
TABLE-15

uEODLTIC COORDINATES,
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE GEOMETRIC MILLIBARS MSL FEET	ALTITUDE DEGREES CENTIGRADE	TEMPERATURE AIR DEGREES CENTIGRADE	HGT. HUM. PERCENT
871.9	4051.4	31.2	34.0
850.0	4795.8	28.0	16.0
764.0	7047.3	16.9	19.0
717.4	9603.9	13.9	18.0
700.0	10281.6	12.6	18.0
673.0	11360.5	10.3	18.0
655.8	12066.4	9.2	18.0
630.2	13145.8	7.1	18.0

STATION ALTITUDE 4651.37 FEET MSL
2 JUNE 1940 1440 MDT
ASCENSUS ID. 35

UPPER AIR DATA
15301600Z
LC-37

TABLE-16

STATION COORDINATES
32°40'17" LAT DEG
106°31'23" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE IN MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA SOUTH N015	WIND DIRECTION DEGREES (16)	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.4	871.9	31.2	13.5	991.3	081.9	210.0	6.0	1.000264
4500.0	855.6	29.3	6.8	984.0	079.0	224.0	6.5	1.000261
5000.0	844.0	27.4	1.0	975.4	076.4	237.7	7.4	1.000245
5500.0	829.3	25.9	-0.0	963.4	074.0	247.3	8.7	1.000241
6000.0	815.0	24.4	-1.1	951.6	072.9	254.7	10.1	1.000236
6500.0	800.8	22.9	-2.2	940.0	071.2	260.4	11.6	1.000232
7000.0	787.0	21.4	-3.3	926.5	069.4	264.2	13.2	1.000228
7500.0	773.3	19.9	-4.4	917.2	067.7	263.0	13.9	1.000224
8000.0	759.8	18.5	-5.6	905.9	065.9	260.4	14.3	1.000220
8500.0	746.3	17.0	-7.0	894.3	064.3	258.7	14.5	1.000216
9000.0	733.1	15.6	-8.3	882.9	062.6	250.1	14.0	1.000211
9500.0	720.1	14.2	-9.7	871.7	060.9	261.7	13.4	1.000208
10000.0	707.2	13.1	-10.6	859.3	059.6	263.3	14.1	1.000204
10500.0	694.4	12.1	-11.9	840.0	058.3	265.9	14.9	1.000201
11000.0	681.9	11.1	-12.3	834.7	057.2	272.1	16.7	1.000197
11500.0	669.6	10.1	-13.1	822.5	056.1			1.000194
12000.0	657.4	9.3	-13.8	809.8	055.1			1.000190
12500.0	645.4	8.4	-14.5	797.8	054.0			1.000187
13000.0	633.6	7.4	-15.3	785.9	052.9			1.000184

STATION ALTITUDE 4651.37 FEET ASL
2 JUNE 62 1440 MDT
ASCESSION NO. 55

MATERIAL LEVELS
1530160055
LC-37
TABLE-17

GEODATIC COORDINATES
32°44'17" LAT DEG
106°31'23" LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	REL. HUM. PERCENT	WIND DATA DEGREES (TN)	SPEED KNOTS
850.0	4792.	28.0	1.5	16°	252° / 7.0
800.0	6536.	22.8	-2.3	19°	260° 4 11.7
750.0	8359.	17.4	-6.6	19°	258° 0 14.6
700.0	10271.	12.6	-11.1	16°	264° 4 14.4
650.0	12295.	8.7	-14.2	16°	

